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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/816,479	03/26/2001	Meisei Nishikawa	205130US2	6415

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1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

NALVEN, ANDREW L

ART UNIT	PAPER NUMBER
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2134

DATE MAILED: 09/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/816,479

Applicant(s)

NISHIKAWA, MEISEI

Examiner

Andrew L Nalven

Art Unit

2134

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 March 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☒ Claim(s) 1 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-21 are pending.

Information Disclosure Statement

2. Foreign Patent Document 6-083200 was not found within the application files and thus was not considered.

Claim Objections

3. Claim 1 is objected to because of the following informalities: Claim 1 recites the limitation "a second device connected to the said first device and *transmit/receive* a signal" on lines 14-15. Examiner has interpreted the claim to instead read "transmitting/receiving." Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 recites the limitation "the second selector inputs a switch signal of the same value as the switch signal that the second selector inputs" on lines 23-24. The cited limitation is unclear and requires explanation or

correction. For the remainder of this office action Examiner has interpreted the limitation to read "the second selector inputs a switch signal of the same value as the switch signal that the *first* selector inputs." Claim 6 recites the limitation, "provided in the external of the first device." The cited limitation is indefinite.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-2, 9-10, 12-13, and 20-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Amar et al US Patent No. 6,522,274. Amar discloses a system to enhance flexibility of serial port interfaces for an integrated circuit.

8. With regards to claims 1 (as best understood) and 12, Amar discloses a first device transmitting/receiving a signal (Amar, Figure 10A, Item 100) that includes a first selector selecting a connection pattern between the signal transmitted/received and a first external terminal configured to transmit/receive the signal based on the switch signal (Amar, column 4 lines 1-12, single byte serial port command), and a first switch switching a connection between the signal and the first external terminal in accordance with the connection pattern selected by the first selector (Amar, column 3 lines 41-65,

Art Unit: 2134

"setup register"), a second device connected to the first device and transmitting/receiving a signal (Amar, Figure 10A, Item 180) that includes a second selector selecting a connection pattern between the signal transmitted/received and a second external terminal configured to transmit/receive the signal based on the switch signal (Amar, column 6 line 60 – column 7 line 11), and a second switch switching a connection between the signal and the second external terminal in accordance with the connection pattern selected by the second selector wherein the second selector inputs a switch signal of the same value as the switch that the second selector inputs (Amar, column 4 lines 8-12, column 26 lines 21-37).

9. With regards to claims 2 and 13, Amar discloses the first device including a bidirectional buffer (Amar, column 4 lines 51-54) and the second device including a bidirectional buffer (Amar, column 9 lines 45-47, column 26 lines 16-20).

10. With regards to claims 9 and 20, Amar discloses the first and second selectors selecting the connection pattern and switching the connection at a predetermined time interval (Amar, column 23 line 62 – column 24 line 40, physical channel order).

11. With regards to claims 10 and 21, Amar discloses the first and second selectors selecting the connection pattern and switching the connection each time the signal is transmitted/received between the first and second devices (Amar, column 23 line 62 – column 24 line 40, switches after each physical channel information is provided).

Claim Rejections - 35 USC § 103

12. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Amar et al US Patent No. 6,522,274 in view of Best US Patent No. 4,168,396.

13. With regards to claim 11, Amar fails to disclose the semiconductor devices being resin sealed. Best discloses semiconductor devices being resin sealed (Best, column 11 lines 3-5). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to utilize Best's method of resin sealing semiconductors with Amar's system because it offers the advantage of providing physical security by increasing the difficulty in accessing internal electrical signals (Best, column 10 line 65 – column 11 line 10).

Allowable Subject Matter

14. Claims 3-8 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

15. Claims 14-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

16. The following is a statement of reasons for the indication of allowable subject matter:

Art Unit: 2134

17. With regards to claims 3-6 and 14-17, the cited prior art fails to specifically teach or suggest first and second selectors deciding connection patterns based upon the pseudo-random number sequences generated by a first and second pseudo-random number generators and thus fails to anticipate or render the above claims obvious.

18. With regards to claims 7 and 18, the cited prior art fails to specifically teach or suggest first and second selectors deciding connection patterns based upon the physical random number sequence generator by the first device's physical random number generator and thus fails to anticipate or render the above claims obvious.

19. With regards to claims 8 and 19, the cited prior art fails to specifically teach or suggest first and second selectors deciding connection patterns based upon the counter values generated by the first and second devices and thus fails to anticipate or render the above claims obvious.

Conclusion

20. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

21. Mizikovsky US Patent No. 5,748,734 discloses a circuit and method for generating cryptographic keys.

22. DeBellis et al US Patent No. 6,044,388 discloses a pseudorandom number generator.

23. Davis US Patent No. 6,209,098 discloses a circuit and method for ensuring interconnect security with a multi-chip integrated circuit package.


Art Unit: 2134

24. Dole US Patent No. 6,628,786 discloses a distributed state random number generator and method for utilizing the same.
25. Zegelin et al US Patent No. 6,694,430 discloses a data encryption integrated circuit with on-board dual use memory.
26. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew L Nalven whose telephone number is 703 305 8407. The examiner can normally be reached on Monday - Thursday 8-6, Alternate Fridays. Following a scheduled move to our new Alexandria campus in October, contact Andrew L Nalven at (571) 272-3839.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Morse can be reached on 703 308 4789. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Andrew Nalven



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